

Listing of Claims:

The following listing of claims replaces all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A method of suppressing the removal rate of an underlying silicon-containing dielectric layer during the chemical-mechanical polishing of a barrier layer in a damascene structure, said method comprising polishing said barrier layer using a chemical-mechanical polishing slurry comprising an amount of an agent that suppresses selected from the group consisting of lysine and arginine sufficient to suppress the rate at which said underlying silicon-containing dielectric layer is removed by at least about 50% as compared to the rate at which said underlying silicon-containing dielectric layer would be removed if said agent was not present in said slurry.

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (currently amended): The method according to claim 21 wherein said agent that suppresses the rate at which said underlying silicon-containing dielectric layer is removed comprises from about 0.1% to about 5.0% by weight of said slurry.

Claim 5 (canceled)

Claim 6 (canceled)

Claim 7 (canceled)

Claim 8 (currently amended): The method according to claim 51 wherein said barrier layer comprises tantalum and/or tantalum nitride.

Claim 9 (original): The method according to claim 8 wherein the pH of said slurry is about 7.0 or higher.

Claim 10 (currently amended): The method according to claim 51 wherein said barrier layer comprises titanium and/or titanium nitride.

Claim 11 (original): The method according to claim 10 wherein the pH of said slurry is about 7.0 or lower.

Claim 12 (currently amended): The method according to claim 51 further comprising abrasive particles.

Claim 13 (original): The method according to claim 12 wherein said abrasive particles are selected from the group consisting of alumina, ceria, copper oxide, diamond, iron oxide, nickel oxide, manganese oxide, silica, silicon carbide, silicon nitride, tin oxide, titania, titanium carbide, tungsten oxide, yttria, and zirconia.

Claim 14 (currently amended): The method according to claim 21 wherein said chemical-mechanical polishing slurry further comprising an oxidizing agent.

Claim 15 (original): The method according to claim 14 wherein said oxidizing agent is selected from the group consisting of peroxides, persulfates, peroxydiphosphates, ferric nitrate, periodic acid, and periodates.

Claim 16 (original): The method of claim 1 wherein said chemical-mechanical polishing slurry further comprises a solvent.

Claim 17 (original): The method according to claim 16 wherein said solvent comprises deionized water.

Claim 18 (original): The method according to claim 1 wherein said underlying silicon-containing dielectric layer is selected from the group consisting of polysilicon, single-crystalline silicon, silicon dioxide, silicon-containing low-k inorganic and organic materials, phosphosilicate glass, and borophosphosilicate glass.

Claim 19 (new): A method removing a barrier layer comprising tantalum and/or tantalum nitride during the fabrication of a damascene structure, the method comprising:
providing a chemical-mechanical polishing slurry comprising an amount of an agent selected from the group consisting of lysine and arginine sufficient to suppress the rate at which a silicon-containing dielectric layer

underlying the barrier layer is removed by at least about 50% as compared to the rate at which said underlying silicon-containing dielectric layer would be removed if said agent was not present in said slurry, wherein the pH of the slurry is about 7.0 or higher; and polishing the barrier layer using the chemical mechanical polishing slurry.

Claim 20 (new): The method according to claim 19 wherein said agent that suppresses the rate at which the underlying silicon-containing dielectric layer is removed comprises from about 0.1% to about 5.0% by weight of said chemical-mechanical polishing slurry.

Claim 21 (new): The method according to claim 20 wherein the chemical mechanical polishing slurry further comprises:

abrasive particles;
an oxidizing agent selected from the group consisting of peroxides, persulfates, peroxydiphosphates, ferric nitrate, periodic acid, and periodates; and
a solvent.

Claim 22 (new): A method removing a barrier layer comprising titanium and/or titanium nitride during the fabrication of a damascene structure, the method comprising:
providing a chemical-mechanical polishing slurry comprising an amount of an agent selected from the group consisting of lysine and arginine sufficient to suppress the rate at which a silicon-containing dielectric layer

underlying the barrier layer is removed by at least about 50% as compared to the rate at which said underlying silicon-containing dielectric layer would be removed if said agent was not present in said slurry, wherein the pH of the slurry is about 7.0 or lower; and polishing the barrier layer using the chemical mechanical polishing slurry.

Claim 23 (new): The method according to claim 22 wherein said agent that suppresses the rate at which the underlying silicon-containing dielectric layer is removed comprises from about 0.1% to about 5.0% by weight of said chemical-mechanical polishing slurry.

Claim 24 (new): The method according to claim 23 wherein the chemical mechanical polishing slurry further comprises:

abrasive particles;
an oxidizing agent selected from the group consisting of peroxides, persulfates, peroxydiphosphates, ferric nitrate, periodic acid, and periodates; and
a solvent.